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ABSTRACT

According to the present invention, discrete measurements of fluid pressure development (and derivatives thereof) are used in optimizing hemodynamics for cardiac resynchronization therapy (CRT) delivery and multiple chamber cardiac pacing, and in enhancing hemodynamics in the event of a sub-optimal left-side lead placement. For example, such diverse pressure measurements include: maximum positive or negative dP/dt values, ePAD, RV systolic, RV diastolic, pulse pressure, and the like. According to the present invention, on a periodic basis or upon demand one or more cardiac pacing intervals are iteratively cycled through a predetermined range and the resulting pressure measurements stored for comparison. The cardiac pacing intervals are then adjusted based at least in part upon the most appropriate, or desirable, measured hemodynamics of the patient. The present invention may be implemented as computer readable instructions executed by a microprocessor-based implantable medical device.